



FINAL PROJECT REPORT - RA.141581

RECONNECTING JAKARTA : A CATALYTIC PUBLIC SPACE

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RECONNECTING JAKARTA : A CATALYTIC PUBLIC SPACE



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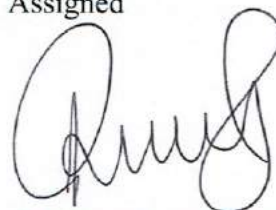
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ABSTRACT

RECONNECTING JAKARTA : A CATALYTIC PUBLIC SPACE

By

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Urbanization has been a major global issue, especially in the 21st century. This rapid urbanization drives a massive amount of population movements to urban areas and its peripheries, and drastically increased urban density. Although it rises several values and strengthened local economic power, urbanization causes degradation on the spatial discourse. Most urban spaces nowadays are formed by economic-driven factors, and leaving the importance of social relations behind.

Urbanization and economic growth in urban areas -- especially in nation's capital like Jakarta -- resulting a high gap or inequality. The existence of kampong and the modern city reflects the spatial segregation and socio-economic disparities. This leads to social exclusion, where the urban poor are marginalized and alienated from their neighborhood. While the physical separation is inevitably seen, low intensity on social interaction is one of other form of restrictions.

The proposed object is a mix function between an outdoor public space and community center, to create a social space that could triggers interaction between social classes and increases social relations. Using urban catalyst studies, this project tries to produce an activity generator. So that the economic-driven urban spaces are not seen as a boundary, but could functions as a social catalyst.

Keywords : interaction, public space, social exclusion, urban catalyst.

FOREWORD

Praise to Almighty Allah SWT for the gracious mercy and tremendous blessings that enables writer to finish this final project report titled Reconnecting Jakarta : A Catalytic Public Space.

This project came up with a curiosity for the real definition of architecture, how could it shapes society, and how far could it goes, alongside with question and statement these past 4 years through writer's education on undergraduate program of Architecture.

Gratitude for all party who helped writer to finish this report. Writer would address this gratitude to:

1. Ir. Purwanita Setijanti, M.Sc, Ph.D, as a mentor who constantly gives writer knowledge and inspiration.
2. Defry Agatha Ardianta, ST, MT, as a coordinator for final project course.
3. Beloved, both parents, for termendous thought, inspiration, motivation to finish this whole process.
4. My fellow friends and colleague, who give support, motivation, and joyful throughout this journey.

This final project sums up what writer read, see, observe, alongside with thoughtful idea that redefines architecture. Frankly, this final project is far from perfect indeed, and needs critics also recommendations for further works.

Surabaya, July 2017

Raihana Putri Hutami

TABLE OF CONTENTS

APPROVAL	
STATEMENT OF ORIGINALITY	
ABSTRACT	i
FOREWORD	ii
TABLE OF CONTENTS	iii
LIST OF FIGURES	iv
LIST OF TABLES	vi
CHAPTER I INTRODUCTION	
I.1 Background	1
I.2 Issue & Context	2
I.3 Design Goals	4
I.4 Design Criteria	4
CHAPTER II SITE & PROGRAMMING	
II.1 Activities & Facilities	5
II.2 Room Programming	8
II.3 Site Description	9
CHAPTER III DESIGN APPROACH & METHOD	
III.1 Design Approach	13
III.2 Research Method	15
III.3 Force-based Framework	16
III.4 Programmatic Forces	16
III.5 Method Implementation	17
CHAPTER IV DESIGN CONCEPT	
IV.1 Formal Exploration	19
IV.2 Technical Exploration	19
CHAPTER V SCHEMATIC DESIGN	21
CHAPTER VI CONCLUSION	34
BIBLIOGRAPHY	35

LIST OF FIGURES

Figure I.1	Inequality in Tanah Abang, Central Jakarta	2
Figure I.2	From Poverty to Social Exclusion	3
Figure II.1	Main Activities in Proposed Object	5
Figure II.2	User's Age Groups	5
Figure II.3	Proposed Site and Surroundings	9
Figure II.4	Proposed Site and Surroundings	9
Figure II.5	Kebon Melati Reservoir & Thamrin Residences Apartment	9
Figure II.6	Main Road Access	10
Figure II.7	East Access to Site, Jl. Kebon Sayur	10
Figure II.8	Precipitation Graph of Kebon Melati Area	10
Figure II.9	Kebon Melati's Average Temperature	10
Figure II.10	Sun Heat and Wind Flow on Site	11
Figure II.11	Jakarta's Best Orientation	11
Figure III.1	Environment-Behavior Approach (Garry T. Moore)	13
Figure III.2	John Ziesel's Research Method	15
Figure III.3	Jay Farbstein's Programming Method	15
Figure III.4	Force-Based Framework	16
Figure III.5	Accessibility and Circulation	17
Figure III.6	Comfortability Concept	17
Figure III.7	Interactive Concept	17
Figure III.8	Borderless Concept	18
Figure IV.1	Zoning	19
Figure IV.2	Massing Concept	19
Figure IV.3	Community Center's Structural Axonometric	19
Figure IV.4	Green Roof System	20
Figure IV.5	Supporting Building's Structural Axonometric	20
Figure IV.6	Utility System	20
Figure V.1	Siteplan	21
Figure V.2	Layout Plan	22
Figure V.3	Building Plan	23

Figure V.4	Building Plan _____	24
Figure V.5	North and South Elevation _____	25
Figure V.6	West and East Elevation _____	26
Figure V.7	Building Section _____	27
Figure V.8	Bird Eye Perspective from Southwest _____	28
Figure V.9	Outdoor Perspectives _____	29
Figure V.10	Outdoor Perspectives _____	30
Figure V.11	Indoor Perspectives _____	31
Figure V.12	Indoor Perspectives _____	32
Figure V.13	Bird Eye Perspective from Northeast _____	33

LIST OF TABLES

Table II.1	Outdoor Area Recapitulation _____	8
Table II.2	Community Center Recapitulation _____	8
Table II.3	Supporting Building Recapitulation _____	8

CHAPTER I

INTRODUCTION

I.1 Background

I.2.1 The Urbanizing World

We are currently living in an urbanizing world, where 54% of the populations are residing in urban areas. By 2030, according to McKinsey Global Institute, 90% of urban growth will take place in Asia, Africa, and Latin America, while 6 in every 10 people in the world will reside in these urban areas.

In Indonesia, with 260.581.100 population, 54% resides in urban areas in total of 140.824.151 (worldometers, 2016). The number is increasing and it has been predicted that by 2035, with total population of 303.6 million, 66% will be centralised in Java Island, especially in its mega-urban region, Jabodetabek, and Bandung.

Urbanization has attained a planetary scale whereby the entirety of the earth is affected by, drawn into, and remade by the need to continuously rearticulate discrete geopolitical, geomorphological, and atmospheric domains into the nexus of resource accumulation and the circulation of exchange value (Brenner 2013 on Simone, 2015). As such, the city is no longer the exemplar or the

culmination of urbanization. Rather, it exists in a plural field of multilayered patchworks, a component in an extensive regionalization of both coordinated and disjointed production, inhabitation, and governance (Brenner and Schmid on Simone, 2015).

I.2.2 Abstract & Differential Space

Urbanization is becoming a real problem in today's society. Although it brings a lot of positive changes in human life, when it comes to the spatial discourse, urbanization causes some degradation on the production of space process. Most urban spaces are formed by economic-driven factors, and leaving the social relations behind.

Differential Space is a term introduced by Henri Lefebvre in his *Magnum Opus*, *The Production of Space*, which refers to a space that serves as a resistance to the forces of homogenization present in abstract space. The abstract space itself is a space that is created by other forces besides social relations, or in most urban cases nowadays, by capitalism or economic-driven factors, which forms homogenization, hierarchization, and social fragmentation. Thus,

differential space tends to preserve spaces from the elimination of existing differences (local, culture, history, natural landscape) in urban areas.

I.2 Issue & Context

I.2.1 Jakarta as A Context

Jakarta is the capital of Indonesia and the largest metropolitan area in Southeast Asia with tremendous population growth and a wide range of urban problems. The overall population of the megacity of Jakarta grew in the 20th Century, from about 150.000 in 1900 to about 28million in 2010 (Rukmana, 2014).

To understand the urbanization in Jakarta, it is essential to recognize the socio-economic dualism, which pervades Indonesian urban society. The manifestations of this dualism are the presence of the modern city and the kampong city in urban areas in Indonesia including Jakarta. The kampong, means village in Bahasa Indonesia, is associated with informality, poverty, and the retention of rural traditions in an urban setting. (Rukmana,2007). Firman (2000) argues that the existence of kampong and modern city reflects the spatial segregation and socio-economic disparities.



Figure I. 1 Inequality in Tanah Abang, Central Jakarta

The “majority” of the central city of Jakarta remains a heterogeneous composite that engineer complex circulations of resources and opportunities, equilibrate access to experience, information, and authority, and cut across clear-cut designations of social standing. This is the case even as hierarchical social organizations, institutionalized indifference, and economic parasitism pervade (Simone, 2015).

I.2.2 Social Exclusion

Social Exclusion or social marginalization in general is a process that deprives individuals, families, and groups of the resources required for participation in the social, economic, and political activity of society as a whole. This mostly caused by ascension of individualism in urban society, poverty, low income, and several other causes.

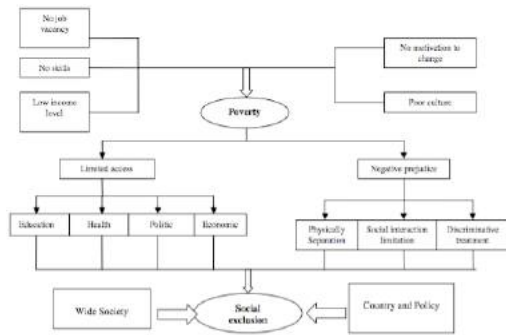


Figure I. 2 From Poverty to Social Exclusion

The term “social exclusion” is also known as social discrimination. According to John Pierson (2010), there are five important forces that drives the process of social exclusion, which are poverty and low income, lack of access to job market, thin or non-existent social supports and networks, the effect of the local area or neighborhood, and exclusion from services.

In Jakarta, the life condition of poor residents in poor settlement is getting worse, beside they are excluded in various fields, they also often get a discriminative treatment. In reality, the physically separation is seen from the restriction of settlement area which is divided two in the poor settlement area and non poor settlement. Besides, social interaction in low intensity is one of other forms of restriction to them whom categorized poor (Febrianty and Hilarius, 2013).

I.2.3 Habitat III Agenda : Inclusive Cities

This form of exclusion is highly contradictory to one of the main goal of the global Habitat III Agenda for 2036, which is creating inclusive cities where nobody is left behind. This inclusiveness is playing an important role to a city, since it is positively engaged to a better urban development. According to Rhonda Douglas, inclusive city is a process that values all people and their needs equally. It is one in which all residents – including the most marginalized of poor workers – have a representative voices in governance, planning, budgeting processes, have access to sustainable livelihoods, legal housing and affordable basic services such as water or sanitation and an electricity supply.

I.2.4 Proposed Object

The proposed object is a mix function of an outdoor public space and a community center aims to creating a social space that could triggers interaction between classes in the neighborhood. This project is also meant to be a linkage between economic-driven urban spaces and middle-low community residential, so that these spaces are not seen as a

boundary, but could also functions as a social catalyst.

I.3 Design Goals

This project aims to create a social space that could triggers interaction between social classes and to stimulate movement. It is also designed to be a linkage between shopping centers, apartments, office building and middle-low community settlement, so that the economic-driven spaces are not seen as a boundary, but could functions as a social catalyst.

I.4 Design Criteria

- The design should be flexible, anticipate people from all social classes, ages, and conditions.
- The design should be a linkage; links surrounding buildings and houses.
- Becoming a focal point in the area.
- Prioritize pedestrian.
- Could accommodate interactive activities for the users.
- Optimizing natural elements.

CHAPTER II SITE & PROGRAMMING

II.1 Activities & Facilities

II.1.1 Activities

Activities in the proposed object is majorly divided into 2, main activities and supporting activities. Main activities are activities related to the aim of this project, while the supporting activities are including administration & security, praying, service and maintenance.

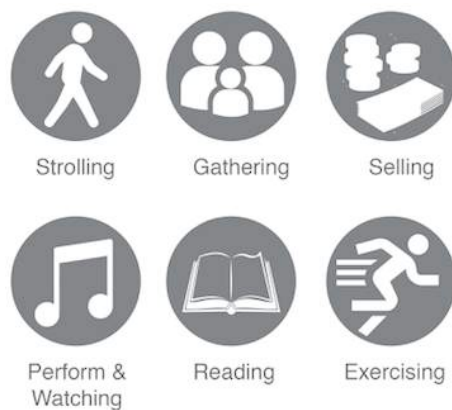


Figure II.1 Main Activities in Proposed Object

II.1.2 Users

According to user's social background and the surrounding areas :

- Residents of surrounding neighborhood : people who live around the area, which are residents of Kempinski condominium and apartment, Thamrin City apartment, Thamrin Residence apartment, and Kebon Sayur Kampung.

- Visitors of shopping centers and employees of office buildings nearby.
- Administrative Personnel : people who work on the management office, janitors, and security.

According to user's age groups and activities performs in the object :

- Universal
- Elderly (> 65)
- Adult (21 - 65)
- Adolescent (11 - 20)
- Children (< 11)



Figure II.2 User's Age Groups

II.1.3 Facilities

Based on site survey, literature study, and precedent study, facilities in the objects are varies according to each activities mentioned above.

a. Strolling

This kind of activity could be done by any age groups, and mostly in outdoor area. Strolling is also one of the main activities in the object, since it performs the aim of the project, to trigger interaction between surrounding

population. Facilities that perform values of strolling are:

Green Open Spaces

Jogging and Pedestrian Track

Bicycle Track

b. Gathering

Gathering could also be done universally, regardless to age groups and social classes. This activity also plays an important role in order to achieve the goal of the project. Facilities that could accommodate Gathering are:

Social Interaction Area

Green Open Spaces

Kids Playground

Daycare / PAUD

Multifunction Hall

Multifunction Room/Studio

c. Selling

Selling is another way to create social interaction. Selling could trigger communication and helps to achieve the goal of the project. Besides, selling activities could enhance the economic level of surrounding neighborhoods, especially the middle-low community in Kebon Sayur Kampung and street sellers around the area. Facilities that facilitates Selling are:

Bazaar Area

Indoor Café

d. Performance & Watching

As an integrated public space, it is also important to give public leisure facilities. This kind of activity could be enjoys universally by all users. On performance & watching activity, there is one specific facility performs in this project, which is Amphitheatre. People could also use the multifunction hall as an indoor auditorium.

e. Reading

Reading activity provided in the object aims to enhance people's knowledge and as a learning tool for people around the site, especially the middle-low community in nearby Kampung. This activity is performed by mini public library inside the Community center building.

f. Exercising

Exercising could also creates social interaction, and triggers communication between user. This kind of activity accommodates community's need, with its spacious area, this project could provide a space for people living

in surrounding apartments and dense kampong to exercise, and get some fresh air. Facilities that perform Exercising Activities are:

Jogging and Bicycle Track

Foot Reflexology Area

Skate Park

Wall Climbing Area

g. Supporting Activities

To support the main functions of this project, it required some essential facilities, which are :

- Praying Room (Musholla)
- Clinic
- Administration Office
- Information Center
- Security Room / CCTV Room

- Security Post

- Lobby

- Toilet and Changing Room

- Bicycle Park Area

- Motorcycle Park Area

- Car Park Area

Utility Facilities:

Stairs

Generator Room

Circuit Breaker Room

Lift Machine Room

Pump House

Upper Water Tank Room

Dumpster Area

Janitor Room

II.2 Room Programming

OUTDOOR AREA

A. Social Interaction Area	
- Pedestrian Track / Jogging	500m2
- Bicycle Track	500m2
- Foot Reflexology Area	75m2
- Kids Playground	200m2
B. Hydroponic Garden	124,2m2
C. Amphitheatre	300m2
D. Wall Climbing & Skate Area	200m2
E. Food court	210 m2
F. Leisure Area	250 m2
G. Parking Area	
- Bicycle Park	65m2
- Motorcycle Park	170m2
- Car Park	750m2
Circulation 30%	1.3 x 3344,2
TOTAL AREA	4347,5 m2

Table II.1 Outdoor Area Recapitulation

COMMUNITY CENTER

A. Main Facility	
-Lobby & Information Center	50m2
-Multifunction Room	200 m2
- Library	200 m2
B. Building Service & Supporting Facility	

- Musholla	40m2
- Clinic	40m2
- Toilets	48m2
- Generator Room	84,5m2
- Circuit Breaker Room	16m2
- Lift Machine Room	40m2
- Pump House	40m2
- Upper Water Tank Room	120m2
- Janitor Room	15m2
C. Administration Office	50m2
Circulation 20%	1.2 x 943.5
TOTAL AREA	1132.5 m2

Tabel II.2 Community Center Recapitulation

SUPPORTING BUILDING

Toilets	48m2
Changing Room	40m2
Janitor Room	5m2
Pump House	10m2
Upper Water Tank Room	10m2
Circulation 20%	1.2 x 113
TOTAL AREA	135,6 m2

Tabel II.3 Supporting Building Recapitulation

II.3 Site Description

II.3.1 Site Location & Features

Location : Teluk Betung I Street, Tanah Abang District, Central Jakarta.



Figure II.3 Proposed Site and Surroundings

The site is a vacant lot addressed as a mixed zone according to Jakarta's 2030 Spatial Planning. Located In the heart of the city, this area is a strategic linkage between shopping centers, office, apartments and low-rise residential area that supports the purpose of the project, as a catalytic public space. Moreover, Kebon Melati reservoir lies alongside the western part of the site.

The total area of the site is 18.350m². The site is equipped with access of electricity, water supply, and drainage. The site has no contour, and has natural physical features such as wild palms, trees, and shrubs.

The site boundaries are described as below:



Figure II.4 Proposed Site and Surroundings

North : Main road access, and Grand Indonesia Shopping Town across the street.

East : Low-rise Residential (Kebon Sayur Settlement)

South : Low-rise Residential (Kebon Sayur Settlement)

West : Kebon Melati Reservoir, indirectly links with Thamrin City Apartment and Thamrin Residences.



Figure II.5 Kebon Melati Reservoir and Thamrin Residences Apartment

II.3.2 Access

The main road, Jl. Teluk Betung I located on the northern part of the site is 9m-width two-way road. It is also accessible to reach the site from the east side, Jl. Kebon Sayur,

although it is limited for motorcycle and bicycle only because of its quite narrow width. On the existing area, Jl. Kebon Sayur is actually accessible for cars, but would not be recommended for this project's circulation.



Figure II.6 Main Road Access



Figure II.7 East Access to site, Jl. Kebon Sayur

On the west side of the area, lies Kebon Melati dam. To reach the site from west area could use a bridge. This bridge will be the main access for four-wheel vehicles, while the eastern and northern part of the site will prioritize pedestrian.

II.3.3 Climate Analysis

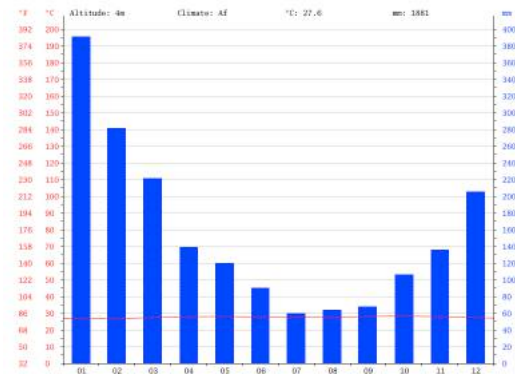


Figure II.8 Precipitation Graph of Kebon Melati Region (Climate-Data.org)

In Kebon Melati region, the driest season is on July, with an average of 60mm of percipitation level. And will reach its maximum percipitation on January with an average number of 391mm. Moreover, the average temperature in Kebon Melati is 28.2°C and quite stable throughout the year, with warmest season on October and average coldest on January (26.7°C)

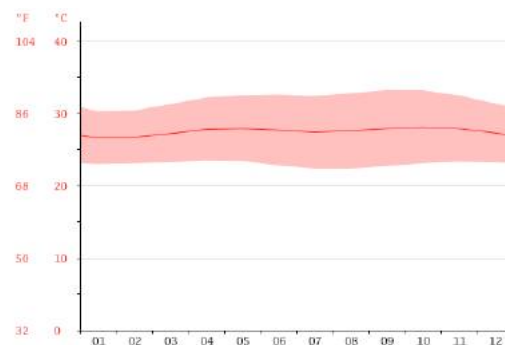


Figure II.9 Kebon Melati's Average Temperature (Climate-Data.org)

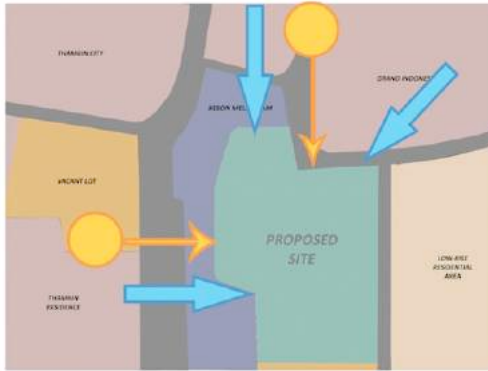


Figure II.10 Sun Heat and Wind Flow on Site

The west and north side of the location receive the highest amount of heat from the sun, while the wind mostly flows from 3 directions ; north, west, and south east.

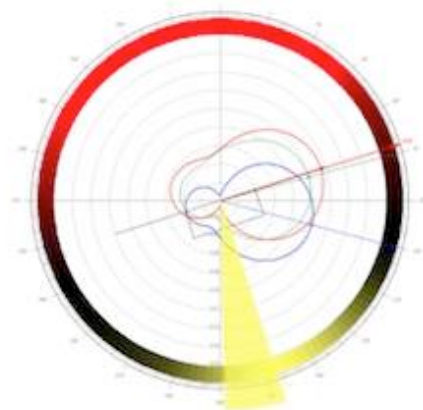


Figure II.11 Jakarta's Best Orientation

This circle shows Jakarta's building orientation analysis, where the yellow color refers to the best orientation and the red arrow shows the worst. From this analysis, best orientation for the proposed object is southeast and the worst one is facing northeast.

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CHAPTER III

DESIGN APPROACH & METHOD

III.1 Design Approach

III.1.1 Environment Behavior

The term “environment-behavior studies” has a number of partial equivalents: “human-environment studies”, “social ecology”, “human factors”, “behavioral architectural”, and sometimes just “programming”. It is a multidisciplinary and multi-professional field, aspects of which are taught by most schools of architecture as well as many departments of psychology and geography, and a few anthropology, sociology, and urban planning departments.

Environment-behavior studies in architecture include the systematic examination of relationships between the environment and human behavior and their application in design process. The basic questions to be asked are : How do people interact with the built environment? What are their needs? How do we apply such understandings in the design process? (Moore, 1979).

Environment-behavior studies encompass more than just function. Behavioral factors go deeper, to the psychology of the user, how he or she perceives building form, social

interaction needs, subcultural differences in lifestyles, and the meaning of symbolism of buildings (Moore, 1979).

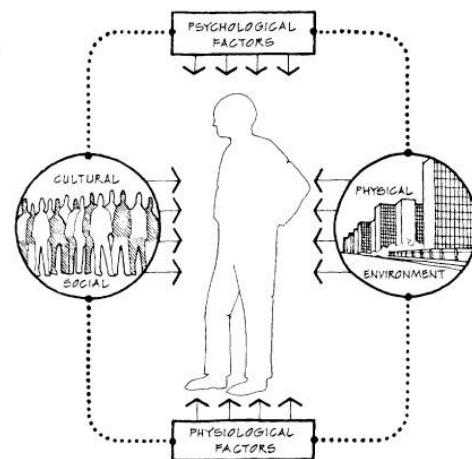


Figure III.1 Environment-Behavior Approach
(Garry T. Moore)

This project focuses on how to create interaction between social classes, to perform a more inclusive city. In order to achieve that, we need to understand the relational dialectics between people of different classes and space through behavioral approach, to finally understand what needs to be provided in the proposed space.

A useful model for seeing the scope of available environment-behavior information, first proposed by the architectural psychologist Irwin Altman, includes three main components:

1. Behavioral Phenomena

Anthropometric, Proxemic,
Territory, Perception,
Cognition.

2. User Groups

Socio-Economic Class, Age
Groups, People with
Disabilities

3. Settings: Urban Region

III.1.2 Urban Catalyst

The term “catalyst” is derived from concept on chemistry. According to Oxford English Dictionary, catalyst is defined as “substance that when present in small amounts increases the rate of a chemical reaction or process but which is chemically unchanged by the reaction”. A catalyst is necessarily also an “activity generator”.

The word “catalyst” also means something that causes activity between two or more persons or forces without itself being affected. On the other hand, the concept of urban catalyst is a new redevelopment strategy that drives and guide urban development. Catalysts are facilities -- usually buildings – that generate urban development in their immediate surroundings, thereby meriting community support, possibly in the form of public subsidies (Sternberg, 2002). This process is influenced by multiple factors, such as

morphological, social, functional, perceptual, visual, and temporal. A catalyst is an urban element that is shaped by the city and then, in turn, shapes its context (Attoe & Logan, 1977).

Urban Catalyst original concept was defined into 8 characteristics as follows (Attoe & Logan on Kongsombat, 2012) :

- a. New element modifies the elements around it.
- b. Existing elements are enhanced or transformed in positive ways.
- c. The catalytic reaction does not damage its context.
- d. A positive catalytic reaction requires an understanding of the context.
- e. Not all catalytic reactions are the same.
- f. Catalytic design is strategic.
- g. A product better than the sum of the ingredients.
- h. The catalyst can remain identifiable.

According to Sternberg’s economic research on impacts of public facilities, here are some important catalytic elements that is vital on forming a catalyst object:

1. The facility must be near commercial establishments or sites
2. The facility must be linked over a critical short distance to a concentration of commercial venues.
3. The venues must be within walking distance of each other.
4. Entrance and exit points shape the pattern of pedestrian traffic.
5. The linkage between facility and commercial venues must be designed to motivate movement.
6. The catalyst must attract and emit attendees at a sufficient rate to stimulate commerce in the linked shopping area.
7. The flow of people from the catalyst to linked venues must generate pedestrian density (as measured in space per person) that makes the street vital, without causing excess crowding.
8. In concentrated pedestrian shopping areas, significant proportions of visitors patronize businesses, even if they did not originally come for that purpose.

III.2 Research Method

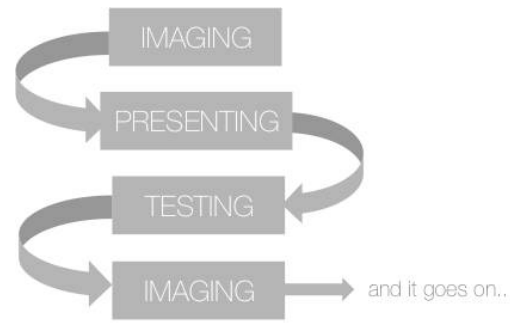


Figure III.2 John Ziesel's Research Method

According to Inquiry by Design : Tools for Environment Behavior Research by John Ziesel (1984), design process is a study based on questions, checking, and searching. There are 5 characteristics used to understanding design process, 3 main activities (imaging – presenting – testing), 2 types of information, shifting the vision of the final product, accepted response domain, as well as the development through a connected cycle (a spiral metaphor). This 3 main activities are the screening process of the final product idea.

- 1 Literature Survey
- 2 User Description
- 3 Performance Criteria
- 4 Program Option and Costs
- 5 Space Specification

Figure III.3 Jay Farbstein's Programming Method

On the programming process, as to achieve a more comprehensive

object, Jay Farbstein introduced 5 steps that considers the main and supporting data, prioritize client's interests and considerations (owners and users). This includes literature survey, user description, performance criteria, program options and costs, and space specification.

III.3 Force-Based Framework

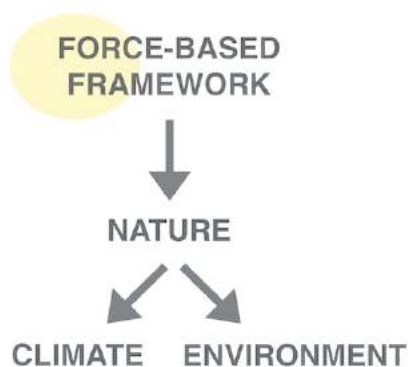


Figure III.4 Force-Based Framework

III.4 Programmatic Forces

Programmatic Forces uses programs in relation to site as the generator of design decisions. Many force based design use some variation of site as they are so relevant to architectural syntax and expression. A program is simply a collection of

Force-based framework focuses on systems thinking and the negotiation of complex forces conceptualized as pressures, assets, constraints, and flows. It sees the design of the physical environments as the result of forces and the application of principles. It has structural and behavioral relationships as well as interconnectivity.

bounded spaces identified as containing particular events. Each event is supported by particular environmental and social characteristics, which allow that activity to be performed in design proposal.

III.5 Method Implementation

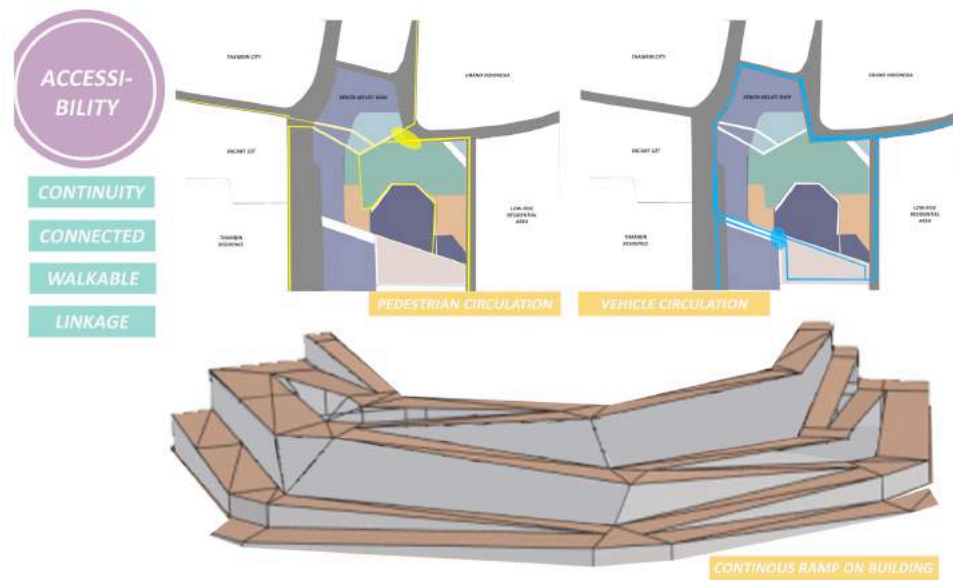


Figure III.5 Accessibility and Circulation

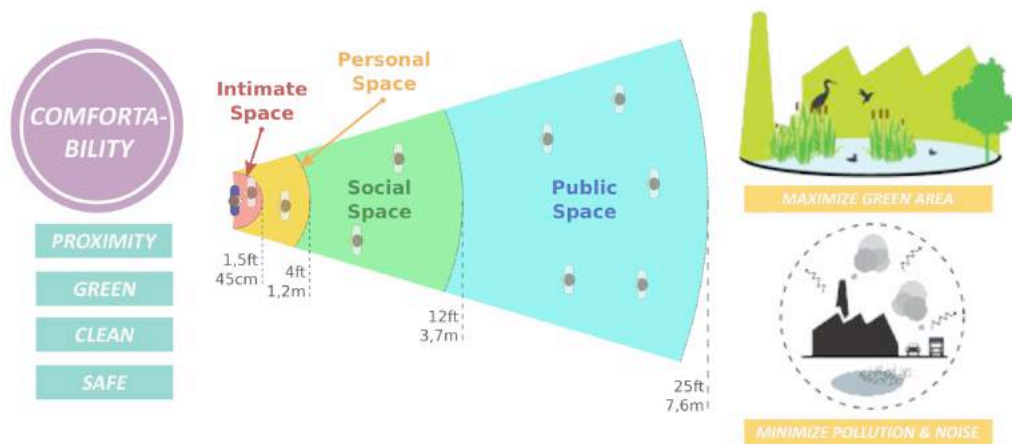


Figure III.6 Comfortability Concept

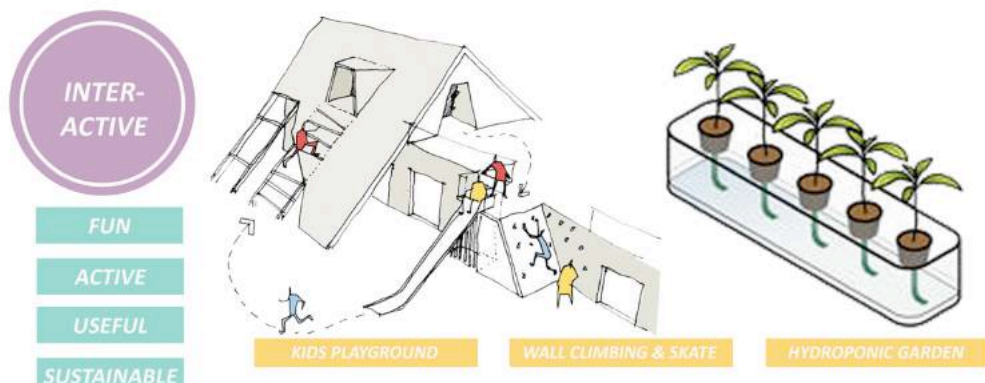


Figure III.7 Interactive Concept

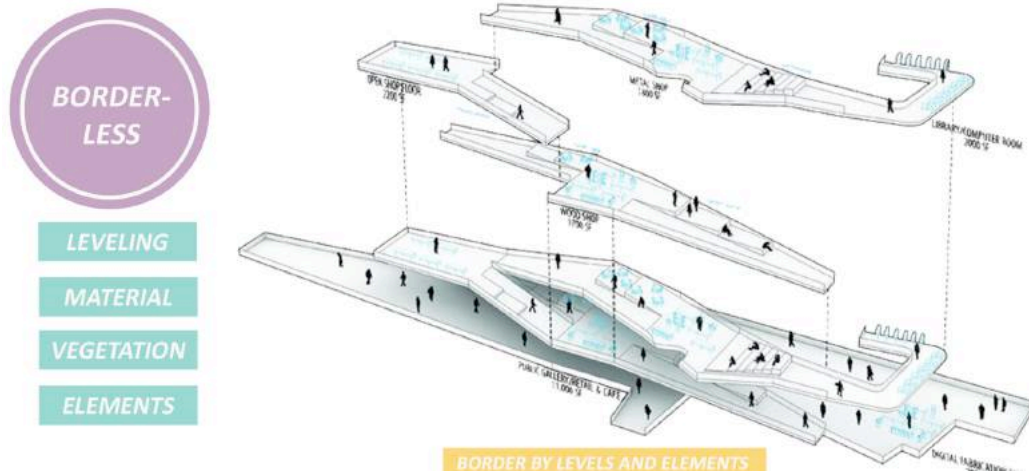


Figure III.8 Borderless Concept

CHAPTER IV DESIGN CONCEPT

IV.1 Formal Exploration

ZONING

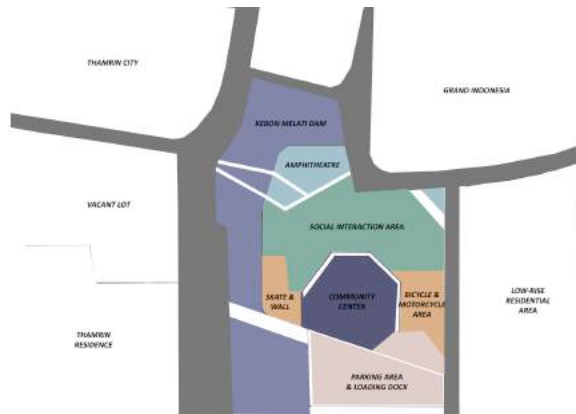


Figure IV.1 Zoning

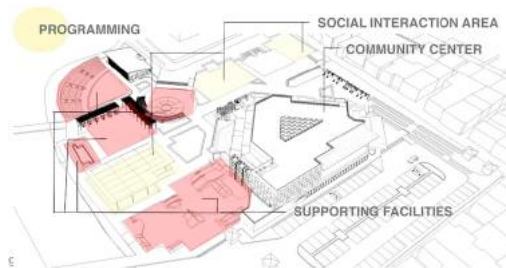


Figure IV.2 Massing Concept

The design decision performed in figure III.5 and III.6 implements consideration from climate, physical environment, and required spaces as mentioned in chapter II.2 which follows Farbstain's 5 steps programming method. Main building entrance and amphitheatre are facing southeast, which performs best orientation. Facilities are also equipped with shadings and vegetation on the west part of each area, to prevent sun heat and exposure from the west direction, and as for the amphitheatre, the level difference of the tribune and tall trees helps to avoid glare for the performers.

IV.2 Technical Exploration

STRUCTURAL SYSTEM

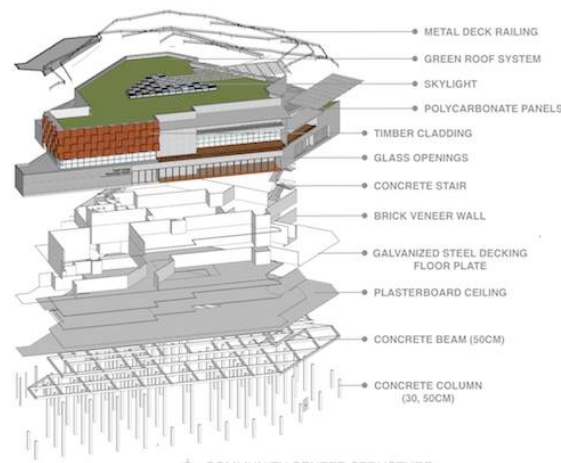


Figure IV.3 Community Center's Structural Axonometric

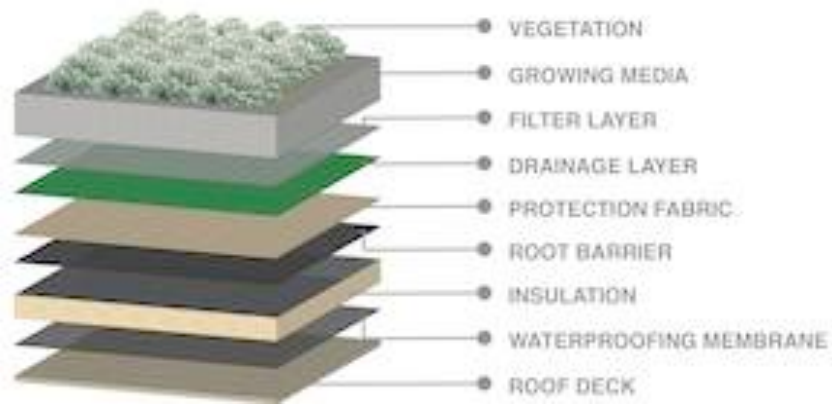


Figure IV.4 Green Roof System

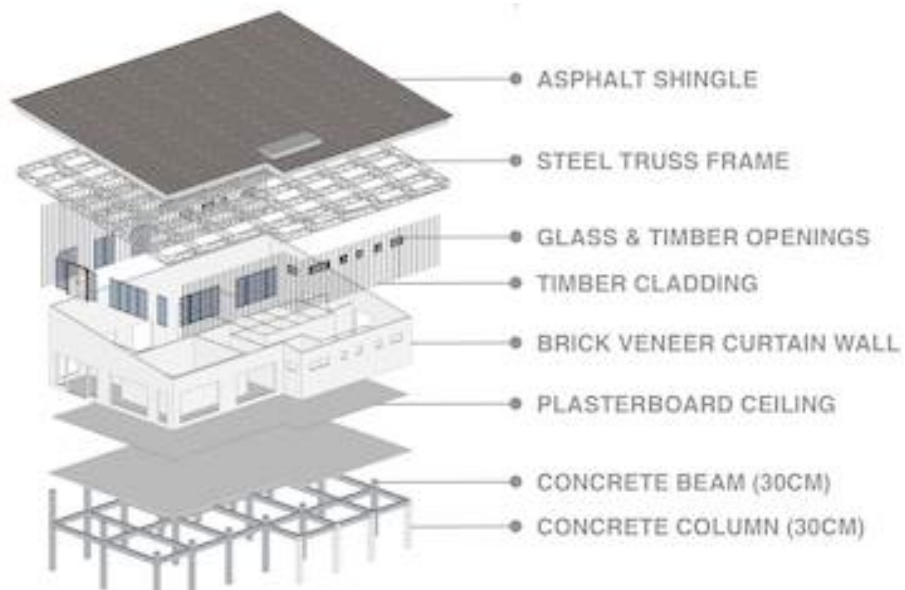


Figure IV.5 Supporting Building's Structural Axonometric

UTILITY SYSTEM

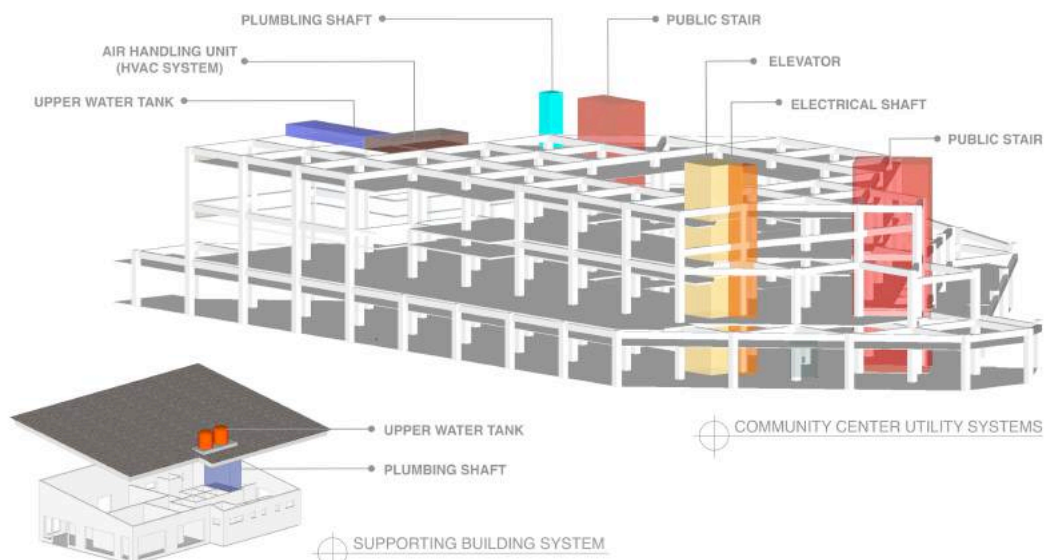


Figure IV.6 Utility System

CHAPTER V SCHEMATIC DESIGN



Figure V.1 Siteplan

KEY PLAN

FIRST FLOOR PLAN
SCALE 1 : 200

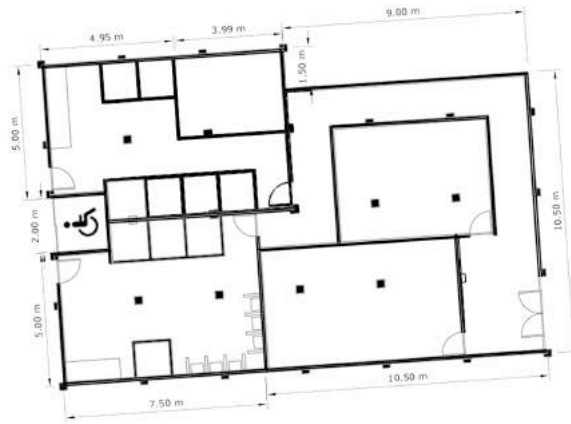
SECOND FLOOR PLAN
SCALE 1 : 200

Figure V.3 Building Plan

SUPPORTING BUILDING



KEYPLAN



U
FLOOR PLAN
SCALE 1 : 100

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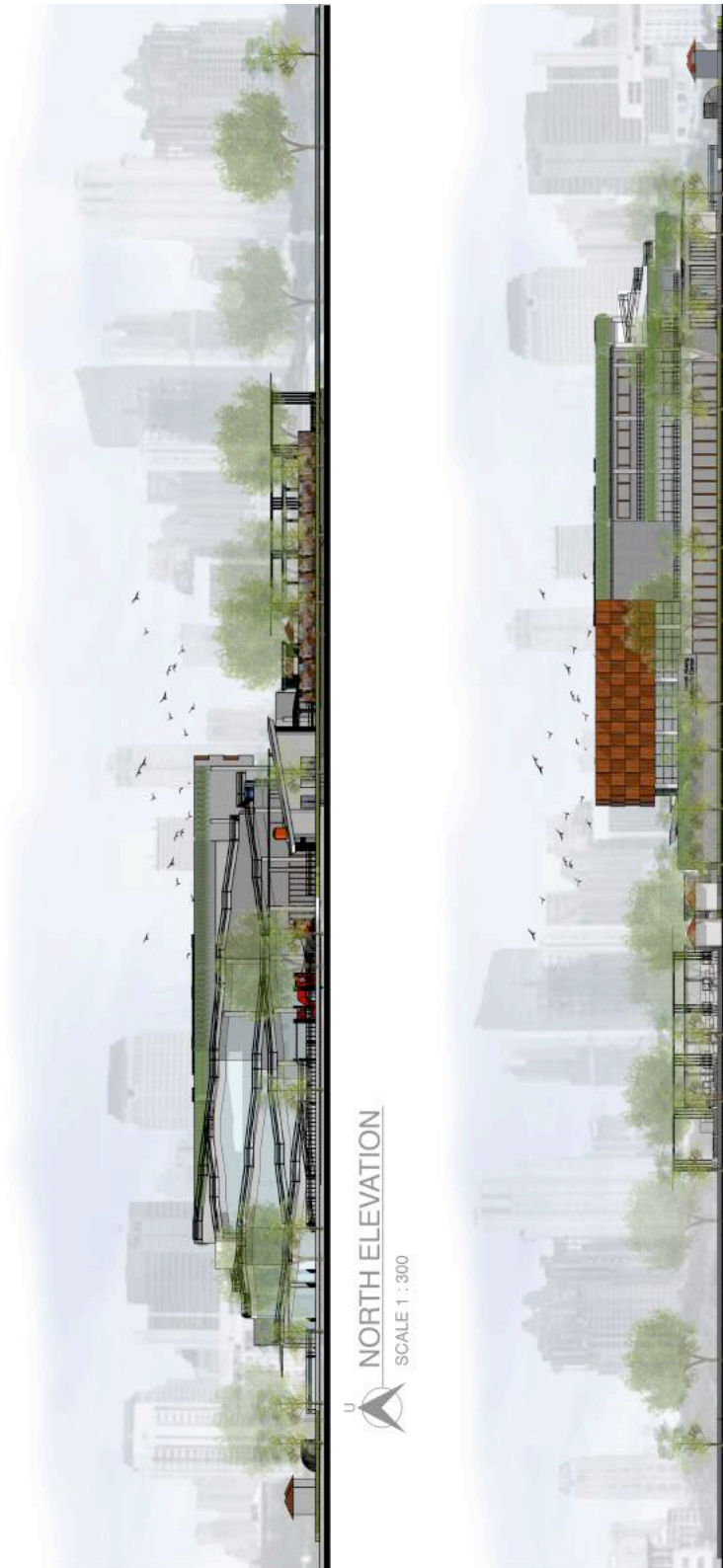
TUTOR :
IR. PURWANITA SETIJANTI, M.SC,
PH.D

COORDINATOR :



24

SITE ELEVATION



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REG. NUMBER 3213 100 051

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TUTOR :

COORDINATOR :

Figure V.5 North and South Elevation

SITE ELEVATION



WEST ELEVATION
SCALE 1 : 300



EAST ELEVATION
SCALE 1 : 300



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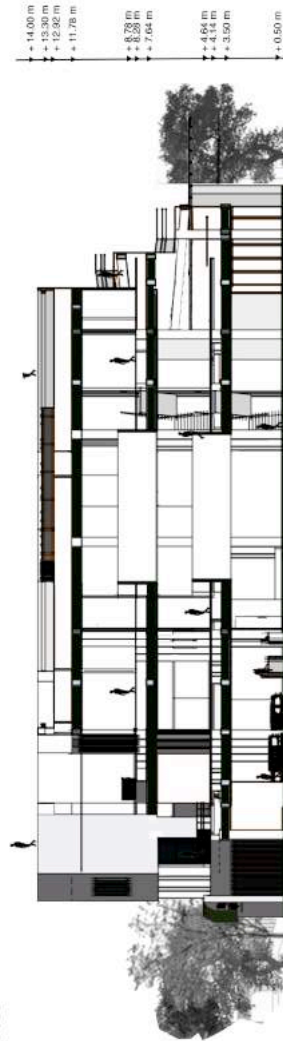
TUTOR :
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Figure V.6 West and East Elevation

SECTION A - A'

SCALE 1 : 150



SECTION B - B'

SCALE 1 : 150



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PH.D

SIGN :
TUTOR :

SIGN :
TUTOR :

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Figure V.7 Building Section



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TUTOR:

COORDINATOR:

Figure V.8 Bird Eye Perspective from Southwest



Figure V.9 Outdoor Perspectives (Amphitheatre, Main Entrance, Continous Ramp)



Figure V.10 Outdoor Perspectives (Car Entrance, Skate & Wall Climbing, Foot Reflexology)

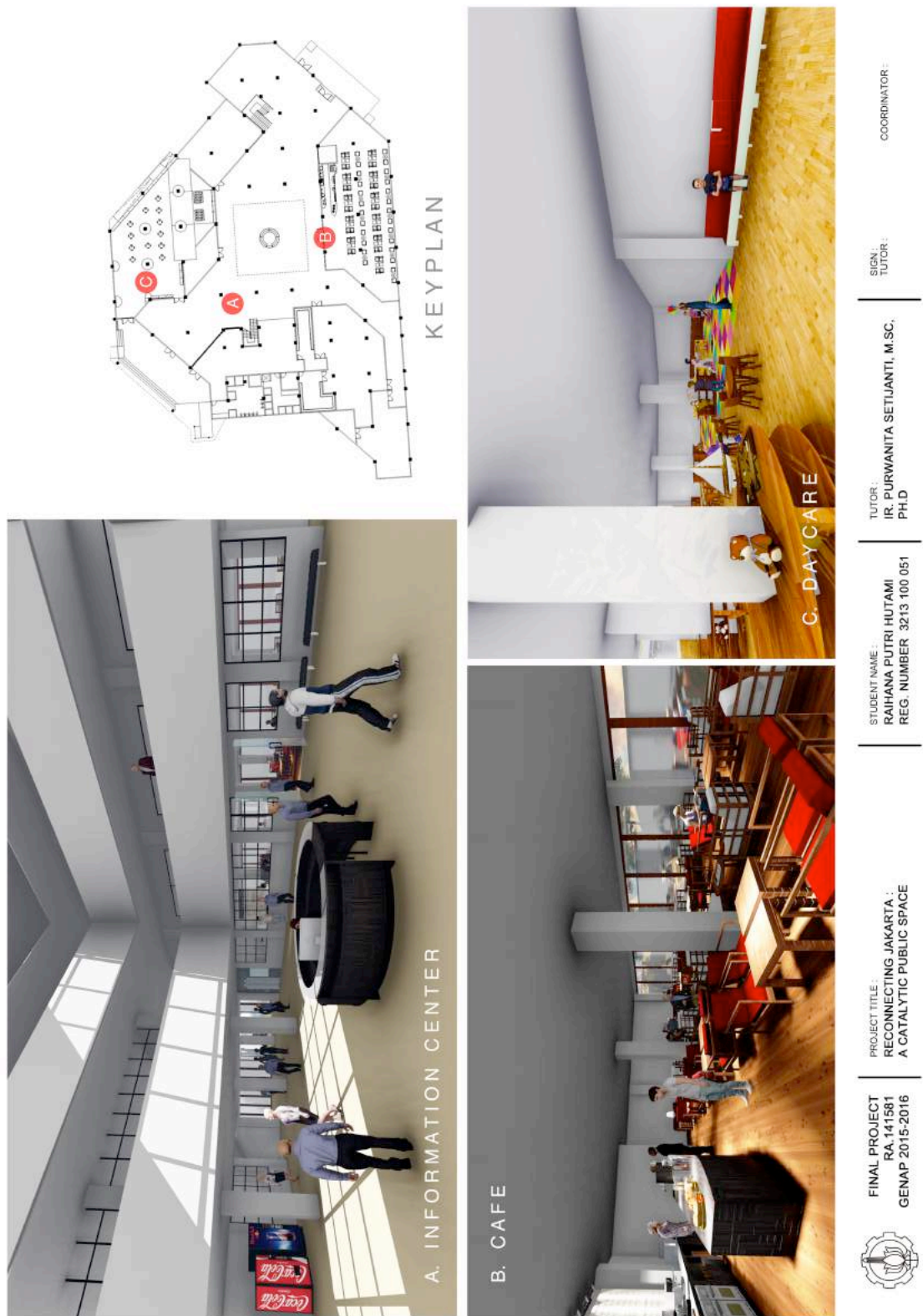


Figure V.11 Indoor Perspectives (Information Center, Cafe, Daycare)

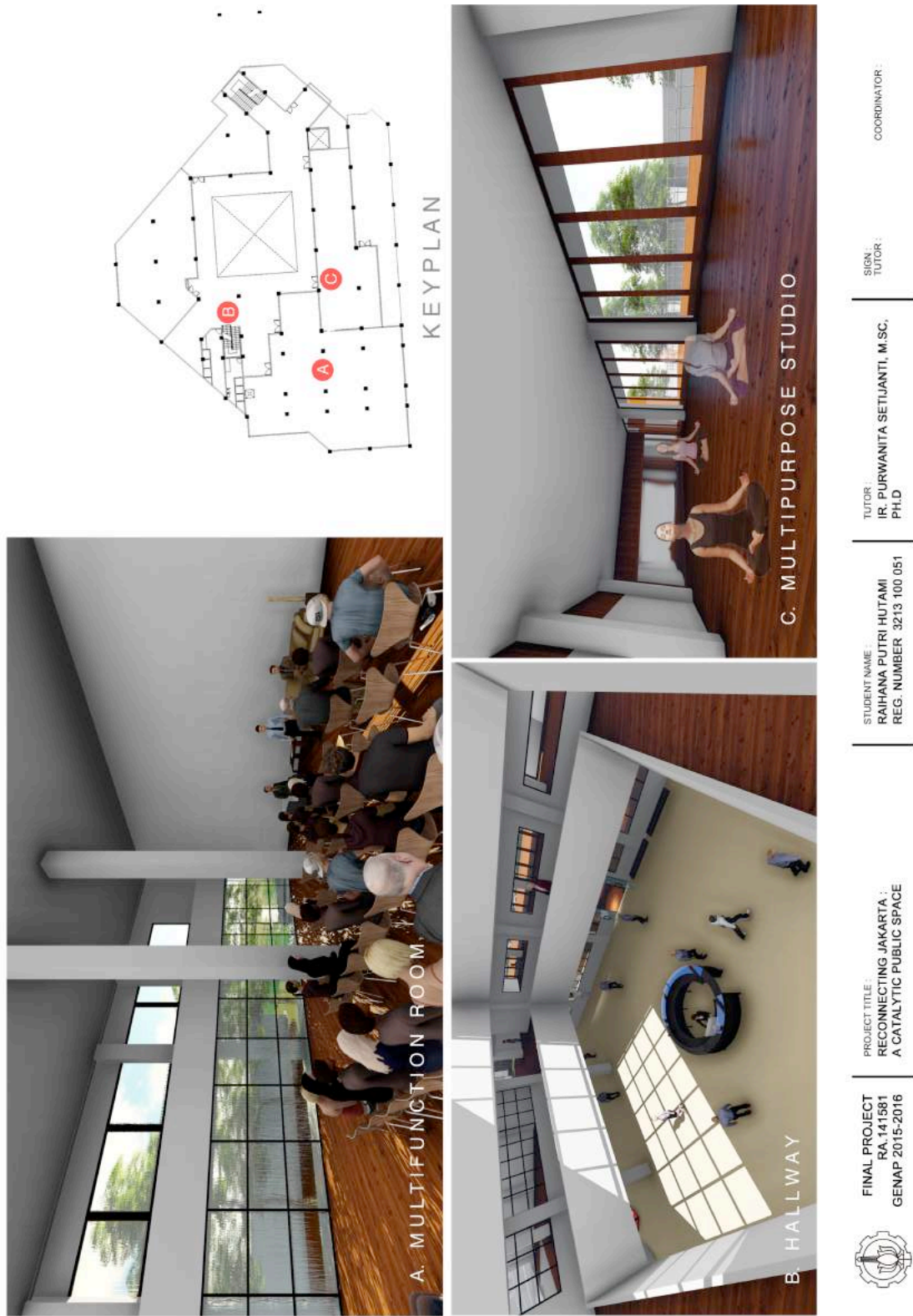


Figure V.12 Indoor Perspectives (Multifunction Room, Hallway, Multipurpose Studio)



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Figure V.13 Bird Eye Perspective from Northeast

CHAPTER VI CONCLUSION

This project came up with an idea to tackle social exclusion that exists in Tanah Abang area. By using environment-behavior and urban catalyst approach, this happen to be an activity generator that could triggers interaction in the community to support a more inclusive neighborhood despite all differences. It could also add a social value that is barely seen in surrounding economic-driven spaces.

Community center that integrated with green public space designed as the social catalyst. Flexibility appears as the core concept with focuses on accessibility, comfortability, interactive spaces, and borderless values for the design decisions to achieve project's goals. The community center building has a continuous ramp, which allows people of all conditions to feel the entire space, and to creates more interaction between people. This also acts as the attractor and focal point of the public space.

Urban Catalyst approach was chosen since it is contextual to the problem that is exists in surrounding area, and reflects values of the word catalyst itsel, which causes activity between two or more persons/matters without itself being affected, or in this context, without changing social culture that rooted in local community.

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